Group Effectiveness Research Laboratory

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REPORTED AMOUNT OF CONTACT AND STEREOTYPING

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Communication, Cooperation, and Negotiation in Culturally Heterogeneous Groups
Project Supported by the Advanced Research Projects Agency, ARPA Order No. 454
Under Office of Naval Research Contract NR 177-472, Nonr 1834(36)

FRED E. FIEDLER AND HARRY C. TRIANDIS
Principal Investigators

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ABSTRACT

The autostereotypes and heterostereotypes of 435 Americans living in Greece, concerning Greeks, and the autostereotypes and heterostereotypes of 668 Greeks, representative of the population of the two largest cities of Greece, concerning Americans, were studied through a modified semantic differential interview. The data replicated all five hypotheses proposed by Triandis and Vassiliou (1967a). However, closer examination suggested some revisions to their theory of stereotyping. A modified theory of stereotyping is proposed, which accounts for all the data.

Reported Amount of Contact and Stereotyping[1]

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The increasing frequencies in inter-cultural interaction which characterize the second half of this century require clearer understanding of the effects of contact on stereotyping. Stereotyping is the assignment of traits to a social or cultural group. We have already documented (Triandis, 1967; Triandis and Vassiliou, 1967a) that such contact often leads to substantial costs and few rewards. Yet, successful intercultural experience is an essential ingredient of the modern world.

From a theoretical point of view the effects of contact also attract interest. There is much ambiguity in the literature concerning the relative importance of various factors in determining the effect of contact. For example it is generally believed that people have preconceptions about the characteristics of outgroups, which are "corrected" when there is opportunity for contact among people who are of equal status. However,

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[1]The data were collected by the Athenian Institute of Anthropos. The analysis was done in connection with the contract to study "Communication, Cooperation and Negotiation in Culturally Hetergogeneous Groups between the University of Illinois and the Advanced Research Projects Agency and the Office of Naval Research (Contract NR 177-472, Nonr 1834(36); ARPA Order No. 454; Fred E. Fiedler and Harry C. Triandis, Principal Investigators) and analyzed by Howard McGuire. Ken Little and Cigdem Kagitcibasi made valuable comments on our earlier draft, during the conference on "Subjective Culture" (Athens Greece, June 12-22, 1968).

cognitive dissimilarity between two groups of people may lead to accentuation of the antipathy between them and may produce more negative stereotypes (Triandis, 1959; 1967). Thus, empirical evidence concerning the effects of contact is highly desirable.

Triandis and Vassiliou (1967a) tested the hypothesis that when (a) two cultures have similar goals, (b) one is more successful in reaching these goals than the other, and (c) members of the two cultures meet, the successful culture's members will become less "favorable" and the unsuccessful culture's members will become more "favorable" in their heterostereotyping. The data obtained from six samples of Americans and Greeks, having different amounts of hetero-cultural contact, supported this hypothesis. However, in that study the samples were selected so that they had different amounts of contact. It is possible that "high contact" Greeks (in that study Greek students in American Universities) become members of a high contact group because they had favorable attitudes; "high contact" Americans (doing a job in Athens, Greece) may have only appeared to have unfavorable stereotypes of Greeks because they were compared to "no contact" Americans (college students in Illinois) who had a norm of giving "liberal" answers to questions involving foreign peoples. The present study was designed to test the relationship between contact and stereotyping by examining only the responses of Greeks and Americans living in Greece.

Stereotypes vary on a number of dimensions. These include:

1. Complexity: number of traits assigned to the other group.
2. Clarity: (a) Polarization of the judgments on each trait dimension, i.e., the extent to which Ss assign non-neutral values of the trait to a group of people. (b) Concensus - i.e., agreement among Ss in assigning the degree of each trait.

3. Specificity - Vagueness: The extent to which the traits are specific or vague (abstract).

4. Validity: The extent to which the stereotypes correspond to the sociotypes, i.e., substantially realistic assignments of traits.

5. Value - the favorability of the assigned traits.

6. Comparability - the extent to which the framework of the perceiver is involved in the stereotyping, so that a comparison is made between auto-stereotype and heterostereotype. When such a comparison is made, and the mean difference on any characteristic between groups A and B, $(\bar{X}_A - \bar{X}_B)$ is large, there may occur a contrast phenomenon, i.e., group A may see itself as more different from group B than it really is. If $\bar{X}_A - \bar{X}_B$ is small group A will see no difference between itself and group B.

The theoretical background of the present study derives from a framework that is quite similar to that proposed by Campbell (1968). If we select two groups of people, A and B, in whom some characteristics X is normally distributed, with $\bar{X}_A$ being a rather different value than $\bar{X}_B$, the greater the actual difference between $\bar{X}_A$ and $\bar{X}_B$ the more likely it is that X will appear in the stereotypes of these two groups. Contact has the effect of making the difference between $\bar{X}_A$ and $\bar{X}_B$ more salient. Thus, the greater the contact the greater the clarity of the heterostereotype. In addition, contact will lead to greater complexity, specificity, validity and comparability.

Favorability is affected by contact in a complex manner, as can be seen from the following example of American-Greek contact.

When Greeks and Americans meet, one of the most salient differences between them is their work habits. The Greeks find Americans as systematic as "well oiled machines." The Americans find the Greeks unsystematic.

Both cultures value work. However, Americans have learned to approach work methodically, planning and estimating time schedules on the basis of previous experiences. Such an approach allows them to keep deadlines reasonably accurately. In short, living in a more predicatable environment, they are systematic. The Greeks, tend on an average to be unaware of the value of planning and systematic procedures. Throughout the centuries they have learned to rely on spontaneous total mobilization of their resources in moments of crises. They feel that work can be accomplished primarily by means of enthusiasm and devotion, rather than through planning.

When Greeks "explain" cognitively such differences in work behavior they justify (relationalize) their unsystematic approach by thinking of the American work habits as "unworthy for human beings." Greeks value the "spontaneous." On the other hand, Americans are unaware of such differences in point of view. As a result they see the Greek work behavior as indicative of disinterest in work. Nevertheless they do perceive the Greeks as "warm", because they see them as strongly intending to enthusiastically complete the work. Our previous data showed that the greater the degree of contact the more accentuated was the tendency of the Greeks to see the Americans as "systematic but cold" and themselves as "unsystematic but warm." Similarly, the greater the contact the more the Americans saw the Greeks as "unsystematic but warm" and themselves as "systematic."

The favorability of stereotyping is a function of the extent to which a group sees itself or another group as able to reach valuable goals. When a group is unable to reach such goals other groups may develop a stereotype of "superiority" versus that group which cognitively explains their success in reaching their goals as well as the lack of success of the other group. From such consideration it may be predicted that when Americans and Greeks meet the American view of the Greeks will become unfavorable and the Greek view of Americans will become favorable.

Triandis and Vassiliou (1967a) tested the hypothesis, that the greater the degree of contact the more the Greek stereotype of Americans will be "favorable"; their data supported ($p < .001$) this hypothesis. They also tested the hypothesis that the greater the contact the more "unfavorable" will be the stereotype of Greeks held by Americans. This hypothesis was also supported ($p < .0001$).

Triandis and Vassiliou (1967a) further hypothesized that the greater the contact the greater will be the clarity of the stereotypes, as measured by the amount of polarization as well as agreement among the Ss from a particular culture, when they assign characteristics to members of their own or another culture. This hypothesis was only supported by the American auto- and heterostereotypes, but not by the Greek ones. It is conceivable that in a small country auto-stereotypes are influenced by a variety of contacts with foreigners which are not specific to contact with Americans, and the Greek stereotypes of Americans were formed through the mass media, and other determinants and therefore they did not depend on the amount of contact.

Finally, Triandis and Vassiliou (1967a) hypothesized that the auto-stereotypes of Americans will become more "favorable" with contact, and those of Greeks will become less "favorable." The hypothesis was confirmed for Americans but was completely disconfirmed for Greeks, whose auto-stereotype also improved with contact.

The disconfirmation of that hypothesis may not invalidate the theoretical arguments behind it. The maximum contact Greeks were college students in American universities, while the no contact Greeks were college students at the University of Athens. By several kinds of criteria the former are "privileged" and the latter "underprivileged." Such differences may influence their self-esteem, hence their autostereotypes. Thus, we propose in the present study to retest exactly the same hypothesis as in the Triandis and Vassiliou (1967a) study. The hypotheses were:

1. The greater the degree of contact, the clearer will be both the auto-stereotypes and the heterostereotypes.

2. The greater the degree of contact the more will the Greek stereotype of Americans be "favorable."

3. The greater the degree of contact, the more "unfavorable" will be the stereotype of Greeks held by Americans.

4. The greater the degree of contact, the more "favorable" will be the American autostereotype.

5. The greater the degree of contact, the less "favorable" will be the Greek autostereotype. (Triandis and Vassiliou, 1967a, p. 317).

Since in the present study we will use better sampling and slightly better controls, we may obtain more insight in the relationships of contact and stereotyping.

The major differences between the present and the previous study are methodological. In the present study we employed "reported amount of contact" as a measure of contact. In the previous study we selected our samples so as to have different degress of contact, but as is clear from the points made earlier, such selection leads to many ambiguities in interpretation. If the results of the present study are consistent with those of the previous study, the theoretical premises on which both are based will be supported. Discrepancies between the two studies will have to be explained by differences in the methodology.

Method

Samples

The American sample consisted of 435 males and females. Thirty-two American interviewers were asked to collect responses from 10 couples each. This procedure allowed for sampling by household, thus making it equivalent to the sampling of the Greek respondents. However, because some of the interviewers were unable to obtain their quota of 10 pairs, they were allowed to interview single individuals. Some were unable to obtain their quote because all of the people they contacted had already been interviewed. Two samples of Greeks were interviewed: (a) interviewing one adult per household, a representative sample of the adult population of Metropolitan Athens (one in 500 of the existing Athenian households) was contacted and (b) a representative sample of the adult population of the city of Thessaloniki (one in 250 households). The population of Metropolitan Athens is over 2 million and represents about 25% of the population of Greece. The population of Thessaloniki is about

350,000 and therefore represents close to 5%. Thus, our sample consisted of most of the urban population of Greece.

Mortality of the Sample

A high mortality of the sample was obtained among female, low education respondents. Since there were none of this type among the American subjects, the mortality of the American sample was insignificant. The mortality of the Athens sample was high, namely of the 400 contacted only 324 were both willing and able to respond. The mortality of the Thessaloniki sample was even larger; of the 600 persons contacted only 444 were both able and willing to respond. Our analysis of the location of mortality within the samples suggests that the majority of the non-respondents were unable rather than unwilling to respond.

Interview

Triandis and Vassiliou (1967a) performed a factor analysis of 41 characteristics given by Americans and Greeks in unstructured interviews in which they described their co-workers from the other culture (Triandis, 1967). Fifteen of these 41 characteristics, having high loadings on the obtained factors, were retained in the present study. These fifteen characteristics were presented together with sentences of the form "In general Americans (Greeks,) tend to be ...." Since a total of four target groups were used, there were a total of 4 times 15 or 60 judgments to be made by each S. The judgments were made by pointing the finger to a cardboard containing a seven-point scale. The fifteen characteristics were used by the interviewer as labels for this scale. Thus, an interview equivalent of the semantic differential judgments made by the Ss in the

Triandis and Vassiliou (1967a) study was used in the interview. For example, an item was:

In general Greeks tend to be

systematic:___:___:___:___:___:___:___:___:unsystematic

Half the items had the favorable characteristic placed on the right and the other half to the left of the cardboard.

The interviewer recorded the S's sex and asked a number of questions. The American interviewers asked the American respondents "How many Greeks do you know as intimate friends?", "How many Greeks do you have as relatives?," "How many Greeks do you know as close acquaintances?," and "How many Greeks do you know as remote acquaintances?" For control purposes the same questions were also asked for some other national groups.

The Greek interviewers asked the Greek respondents corresponding questions about Americans. In addition, the Greeks answered five questions concerning their education, three questions concerning the time and place of their birth and the date of their moving to the metropolitan area in which they were interviewed, as well as questions about their occupation, their father's occupation, the household income, and the number of persons working in the household. Finally, the interviewer provided a rating of the "kind of house" (luxurious to substandard) in which he found the interviewee. From all this information the social status of the S was estimated by two raters, on a 9-point scale. The interrater reliability was high and the average rating of the two raters was employed in the analyses.

Analyses

Contact. Examination of the reported contact showed that very few Ss had relatives in the other culture. These Ss were separated from the

main samples and analyzed separately. It was hoped that the intimate friend, close, remote, and no acquaintance items would result in a Guttman scale, but the data did not support this expectation. In fact, those who reported having intimate friends did not necessarily report having remote acquaintances. As a result we established four categories and judmentally placed each interviewee in one of them. The categories were: Maximum contact, several intimate friends; Much contact, some intimate friends, many close acquaintances; Some contact, no intimate friends, few close acquaintances, many remote acquaintances; No contact, no intimate, no close, no remote acquaintances. Table 1 shows the Ns of the completed interviews classified in each of these categories.

Characteristics. The response obtained from the Americans and the Greeks (separating the Athens and Thessaloniki samples) to the items"..... Americans tend to be," "Greeks tend to be," were factor analyzed. Since there were 15 characteristics the maximum possible of factors was 15, but actually 5 or 6 factors from each sample were obtained.

Plots. The means and standard deviations of the responses of each sample to each items were recorded. The responses of the Ss homogeneous in the amount of reported contact, sex, and social class were plotted in separate graphs.

Results

1. Stereotypes of the total samples. Tables 2, 3, and 4 summarize the stereotypes obtained from the three samples. Before examining these results it is necessary to describe the differences between Athens and Thessaloniki.

Table 1

Number of Americans and Greeks with Different Amounts of Contact

Contact Category	Americans	Greeks
Maximum*	112	43
Much	148	63
Some	149	83
No	26	580
TOTAL	435	769

*In interpreting these results, it should be kept in mind that the concept "intimate friend" has different meaning for Americans and most Europeans. Europeans tend to have a few intimate friends with whom they are really intimate, while Americans tend to have many friends, but not really intimate ones. It is our guess that the 112 Americans who report having several Greek intimate friends are talking about friends that they see once a week socially and perhaps three times a week in work related social settings. By contrast the Greeks are likely to see their intimate friends daily and to discuss many very personal (intimate) topics with them.

Table 2

American Stereotypes

Stereotype	Interpretive Label for Factor	Scales Loading High on Factor
Americans see Americans as:	Pragmatic	drive carefully, accept change readily
	Innocent	naive, trusting
	Nice	modest, obliging
	Flexible	flexible
	Effective	systematic, witty, decisive
Americans see Greeks as:	Impulsive	unsystematic, emotionally uncontrolled, drive competitively
	Distrusting outsiders	egotistic, sly, suspicious
	Ineffective	follow procedures approximately, indecisive
	Charming people	witty, obliging, honest
	Rigid	rigid

Table 3

The Stereotypes of Athens Greeks

Stereotype	Interpretive Label for Factor	Scales with High Loadings
The Athens Greeks see Greeks as:	Spontaneous	witty, emotionally uncontrolled
	Distrusting outsiders	egotistic, sly, suspicious
	Reliable	modest, honest, systematic
	Maneuvering Antagonists	flexible, competitive, suspicious
	Cooperating Inexactly	obliging, follow procedures approximately
The Athens Greeks see Americans as:	Effective	systematic, follow procedures exactly, decisive
	Naively competitive	naive, competitive, rigid
	Arrongnatly witty	Arrogant, witty
	Rationally competitive	competitive, emotionally controlled
	Straightforward (philotimous)*	obliging, honest

*Uniquely Greek, untransltable concept (See Triandis & Vassiliou, 1967b)

Table 4

The Stereotypes of the Thessaloniki Greeks

Stereotypes	Interpretative Label of Factor	Scales with High Loadings
The Thessaloniki Greeks see Greeks as:	Distrusting outsiders	egotistic, suspicious, sly
	Competitively progressive	competitive, follow procedures approximately, accept change readily
	Philotimous*	obliging, honest
	Controlled	systematic, emotionally controlled, drive carefully
	Socially enjoyable	witty, modest
The Thessaloniki Greeks see Americans as:	Arrogant	arrogant, haughty
	Distrusting outsiders	suspicious, sly
	Effective	systematic, witty, decisive
	Self-righteous	rigid, honest, emotionally controlled
	Flexible	follow procedures approximately accept change readily

*Uniquely Greek, untranslatable concept (See Triandis & Vassiliou, 1967b)

Athens includes groups from all Greece. About 75% of its present inhabitants come from the provinces. Thus, the Athens sample is the "best" urban Greek sample possible. Thessaloniki is in the North where the climate is more rigorous, while Athens has a mild climate. Corresponding to these climatic differences there are a number of widely held regional stereotypes which according to each subgroup differentiate the one from the other. Thus, Thessaloniki is supposed to be "full of" hardworking, vigorous, realistic, honest, effective, but also rigid people, while Athens is more mixed. Athens has about 100,000 Americans. Thessaloniki has probably less than 5,000.

These differences are properly reflected in our samples: The Athens Greeks report "no contact" with Americans in 56.5% of the cases, while the Thessaloniki Greeks report "no contact" in 89.5% of the cases.

Turning now to Tables 2-4 we note that the Americans have auto-stereotype (pragmatic, innocent, nice, flexible, effective) consisting of entirely positive attributes, while they view the Greeks negatively on four out of five of the factors. The "charming people" factor is exceptionally interesting, because it was quite salient in interviews conducted by Triandis (1967) and the factor analysis confirmed the interviewer's intuitive feeling that this was an important dimension of American-Greek relations in Athens.

Turning now to a comparison of the two Greek samples, we note first that the Thessaloniki Greeks have a somewhat more positive autostereotype than the Athens Greeks. They both see Greeks as Distrusting Outsiders but the Athens sample emphasizes that Greeks are spontaneous, reliable and cooperating inexactly while the Thessaloniki sample emphasizes that they are competitively progressive and controlled.

This difference in the autostereotype can also be seen in the mean differences in the ratings on the various traits, obtained from the two samples. Significant differences (by *t*-test, beyond $p < .01$) were obtained as follows: the Athens Greeks saw Greeks as more unsystematic, less modest, more emotionally uncontrolled, more flexible, less decisive planners, more competitive drivers, and less willing to adopt changes than did the Thessaloniki Greeks. Thus, some of the widely held regional stereotypes, referred to above, appear to be reflected in the auto-stereotypes of the two cities.

Both Greek samples see Americans as effective. But, while the Athens sample saw Americans as arrongantly, witty, naively, competitive, and straightforward (Philotimous), the Thessaloniki sample saw them as flexible, yet as arrogant, distrusting outsiders and self-righteous. This difference in stereotyping may be due to the amount of contact with Americans, since 43.5% of the Athens, but only 10.5% of the Thessaloniki samples report at least some contact with Americans. In general, it would seem that the Athens sample is more positive towards Americans. However, the differences that could be established by *t*-tests were not numerous: the Athens sample saw Americans as more naive, not as extreme in emotional control (i.e., more "human"), and more willing to adopt changes (i.e., more progressive), than did the Thessaloniki Greeks. Differences in these scales do not appear convincing proof of a more positive stereotype. On the other hand, the strong correlation of suspicious and sly in Thessaloniki and the fact that Americans are seen as having these characteristics by that sample suggests that this sample is less favorable towards Americans than the Athens sample.

2. The effect of reported contact on stereotyping. We will first examine our five hypotheses. The first hypothesis was that the higher the degree of contact the clearer the autostereotypes and heterostereotypes. In the previous study this was supported with the data obtained from the American Ss and was not supported with the data obtained from the Greeks. In the present study we investigated this problem by counting the number of traits (out of the possible 15) on which the judgments made by a sample of Ss differed significantly (tested by t-test, $p < .01$) from neutrality (scale value 4). This test requires both that the samples respond to the trait in non-neutral terms and that the standard deviation of the judgments be sufficiently small so that the mean of the judgments can be significantly different from the midpoint of the scale. Using this test, the American "no contact" group showed "significant auto-stereotypes" on only 4 scales, while the other three American groups, that did report contact, averaged 10 out of 15 "significant stereotypes." Thus, the trend is definitely in favor of the hypothesis. There was no such trend for the Greek sample. The American stereotypes of Greeks showed a similar pattern of results, with the "no contact" group having only 3" significant stereotypes", while the groups with contact had 9, 10, and 11 respectively. Again, there was no such trend in the Greek data. Thus, the present data replicate exactly the Triandis and Vassiliou (1967a) conclusion: The hypothesis is supported for Americans and is rejected for Greeks.

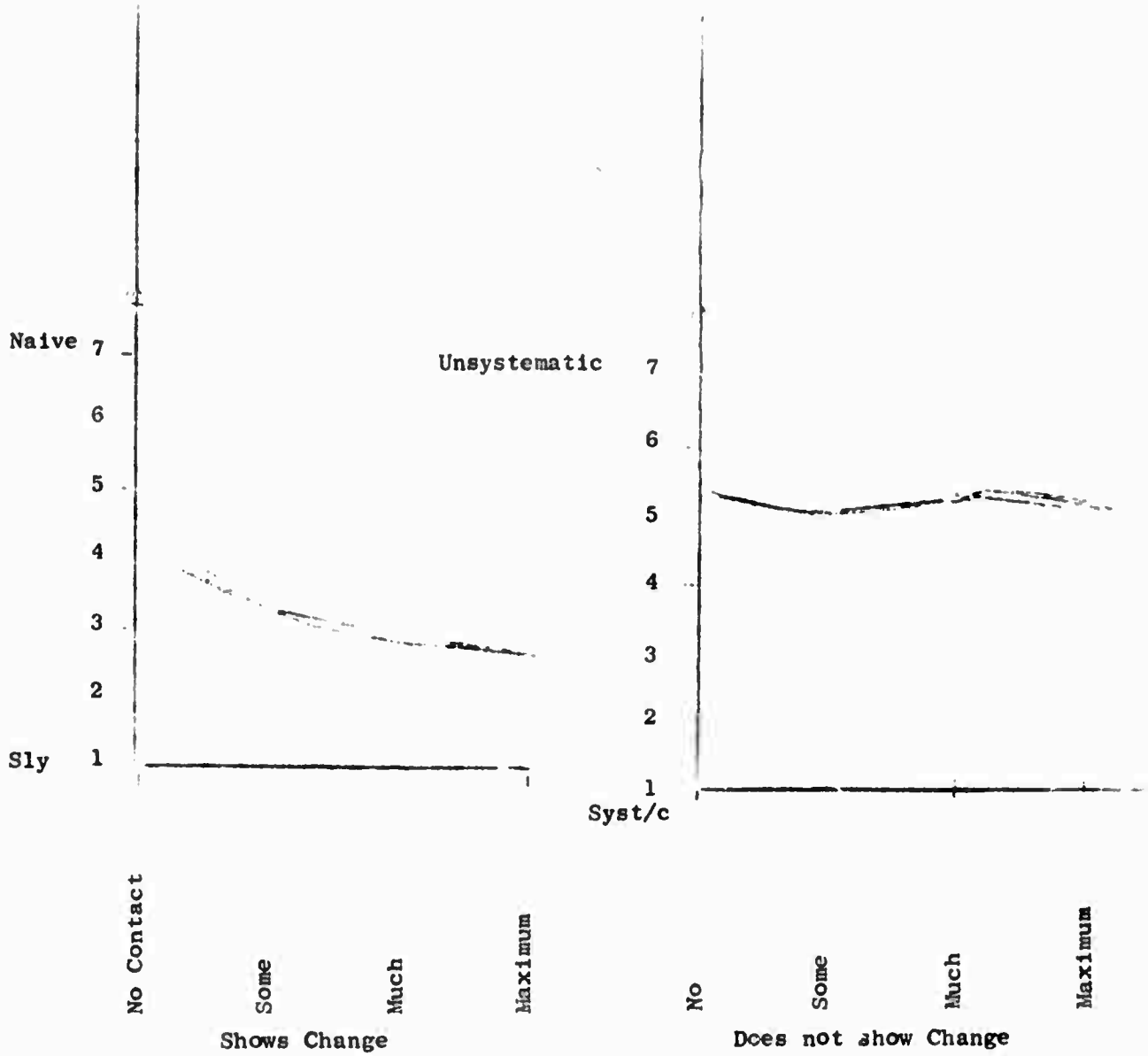
The second hypotheses was that the greater the contact the more "favorable" will be the Greek stereotype of Americans. The third hypothesis was that the greater the contact the more "unfavorable" will be the stereo-

type of Greeks held by Americans. To test these hypotheses we examined the graphs that related the amount of contact and stereotyping for each of the samples and for each of the traits. Figure 1 shows a sample of such drafts. Table 5 shows the summary of this inspection. A graph which had a definite, uninterrupted slope, was considered to imply "improvement" in the stereotype to the extent to which it increased with contact, with respect to the pole of the characteristics listed in Table 5, or decreased with respect to the opposite characteristic. It was assumed to imply "deterioration" of the stereotype if it decreased with respect to the pole listed in the Table or increased with respect to the opposite of the listed pole. This procedure forced all 15 characteristics to be evaluative. The decision as to what is considered favorable was in part based on the results of the factor analysis of Triandis and Vassiliou (1967a) and the correlations observed in each culture between the particular scale and the scale "good-bad." For example, "naive" people were judged as more "good" than "sly" people, hence naive is listed in Table 5 as being a "good" "trait".

Table 5 shows that on 6 out of 7 occasions on which there was a detectable relationship between the amount of contact and stereotyping, hypothesis II is supported; on 8 out of 11 occasions on which there was a detectable relationship hypothesis III is supported.

The control stimuli employed in this study showed no such relationships. Fischer exact tests show our observations to deviate significantly from chance ($p < .05$; one tailed)for hypothesis II and to tend towards significance for hypothesis III. Another way to test these hypotheses

Figure 1: Examples of Graphs Used to Construct Table 5 and Other Similar Tables



The perception of Greeks by American males on two characteristics, the first showing a change with contact and the other showing no change with contact.

is to assume that if chance were operating when there is a relationship between contact and stereotyping it would result in an improvement half the time and a deterioration of the stereotype half the time. In that case the binominal test may be used. When this is done hypothesis II is supported at $p < .06$, and hypothesis III at $p < .11$ (both one-tailed). Considering that these results constitute replications of previously obtained results, with a different methodology, we accept the hypotheses.

The fourth hypothesis stated that the greater the contact, the more favorable the American autostereotype and the fifth hypothesis stated that the greater the contact the less favorable the Greek autostereotype. Table 6, which was constructed the same way as Table 5, shows the relevant data. The fourth hypothesis is supported for 6 out of 6 and the fifth hypothesis is supported for 7 out of 8 of the observations. These results are significant at $p < .016$ and $p < .035$ respectively (both one-tailed), by the binominal test. We therefore accept the fourth and fifth hypotheses.

3. Exploratory studies. The characteristics of the stereotypes presented above prompt some further exploratory studies.

Complexity. There is obviously a trend (Table 5) to assign more traits when there is reported contact for the American Ss (11 out of 15 traits) but not for the Greek Ss (7 out of 15). The Greeks have a stereotype of Americans regardless of contact and apparently contact does not influence its complexity.

Specificity. There was not a sufficient range of specific and non-specific traits to explore this variable.

Table 5

Changes in Heterostereotypes as a Result of Contact

Characteristic	Americans see Greeks see Americans					
	Improve	Same	Deteriorate	Improve	Same	Deteriorate
systematic		1		1		
witty	1				1	
naive			1	1		
unselfish			1		1	
modest		1		1		
trusting			1	1		
cooperative		1			1	
obliging	1			1		
emotionally controlled			1		1	
flexible		1			1	
honest	1			1		
follow procedures exactly			1			1
decisive			1		1	
drive carefully			1		1	
accept work change			1		1	
TOTAL	3	4	8	6	8	1

Table 6

Changes in Autostereotypes as a Result of Reported Contact

Characteristics	Americans			Greeks		
	Better	Same	Worse	Better	Same	Worse
systematic		1				1
witty	1				1	
naive		1			1	
unselfish	1					1
modest	1				1	
trusting	1				1	
cooperative		1			1	
obliging		1			1	
emotionally controlled		1				1
flexible		1				1
honest	1			1		
follow procedures exactly	1					1
decisive		1				1
drive carefully		1				1
accept work change		1			1	
Total	6	9	0	1	7	7

Validity. Underlying our theoretical scheme is the notion that the greater the probability that "real" differences will be perceived, i.e., the greater the validity of the stereotype. The problem of how to establish the existence of real differences is overwhelming. Schuman (1966) has shown that it can be done and that stereotypes can be shown, under certain conditions, to have validity. Given the kind of data we have, can we obtain any evidence in support of this notion?

We will argue that there are several ways of testing this basic notion, and though none of them are satisfactory in themselves, if several unsatisfactory, but adequate, methods give convergent results we can feel more secure that our underlying theoretical assumptions are valid. We turn, then, to a number of ways to test these notions.

First, we might examine the degree of agreement of the autostereotype of Group A and the heterostereotype of other groups with respect to Group A. When agreement is observed, this may be due to a real difference. Second, we can examine if reported contact brings a heterostereotype "in line" with the target group's autostereotype.

In our case we can provide a good test of the hypothesis via this approach, since the Triandis (1967) study has already reported the degree of agreement of the Greek autostereotypes and the American stereotypes of Greeks, and also the agreement of American autostereotypes with Greek stereotypes of Americans.

Third, we can examine the similarities or differences in the trends of the relationships between our measures of contact and the judgments of a particular group concerning the characteristics of another group.

Thus, we can see whether the American stereotypes of Greeks change the same way as a function of (a) reported contact (present study) and (b) actual contact (as obtained by Triandis and Vassiliou, 1967a).

Examination of the Greek autostereotypes and the American stereotypes of Greeks showed that there was agreement on the characteristics listed in Table 7.

As can be seen in Table 7, for 9 out of 11 characteristics on which the two cultural groups are in agreement, concerning what the characteristics of Greeks are, the greater the amount of reported contact the more extreme the rating of Greeks by Americans on that characteristic. This constitutes extremely strong confirmation of our theoretical notion $p < .033$ by bionominal; $p < .025$ by Fischer test).

However, the theoretical notion can also be tested by inspection of the relationships between contact and stereotyping for the remaining four characteristics. On these four characteristics, the Americans and the Greeks disagreed. But, do the results of the present study agree with those of Triandis and Vassiliou (1967a)? Specifically, if there is a relationship between contact and stereotyping in the present data, does this also appear in the previous data? Table 8 presents the relevant summary. In two out of four of these characteristics, the greater the contact (by whatever estimate) the more the Americans see the Greeks as having this characteristic. For the other two characteristics (arrogant and indecisive) it appears that even the no contact Americans (who after all live in Greece) agree with the maximum contact Americans, so that there is no relationship between the amount of reported contact

Table 7

American Heterostereotypes of Greeks Showing Functional Relationships with the Amount of Contact

(NOTE: This table contains only characteristics on which the Greeks autostereotype is in agreement with the American heterostereotype, as determined in the Triandis and Vassiliou (1967a) study.)

Characteristics	Relationship to Contact
Unsystematic	None
Witty	Yes
Suspicious	Yes
Competitive	Yes
Emotionally Uncontrolled	Yes
Rigid	None
Obliging	Yes
Honest	Yes
Follow procedures approximately	Yes
Drive competitively	Yes
Resist changes in working conditions stiffly	Yes

Table 8

Greek Characteristics Showing Functional Relationships with the Amount of Contact

Characteristics on which there is disagreement between Americans and Greeks in the Triandis & Vassiliou (1967a) study.

Characteristic	Reported Contact (Present Study)	Actual Contact in (Triandis and Vassiliou 1967a)
Sly	Yes	Yes
Egotistic	Yes	Yes
Arrogant	Flat curve (but with definite elevation)	Yes
Indecisive	Flat curve (but with definite elevation)	Yes

and the responses of the Ss. On both of these traits the previous study had shown a relationship with contact. Thus, these results must also be considered as supporting the basic theoretical notion. There are reasons to believe Triandis and Vassiliou (1967b) that the Greeks do have the characteristics listed in Tables 7 and 8, and the greater the contact, by whatever measure, the greater the likelihood that the Americans will give an extreme rating to the Greeks on those characteristics. A fuller explanation of the way these characteristics are integrated in Greek self-perceptions can be found in Triandis and Vassiliou (1967b).

Tables 9 and 10 list the characteristics which the majority of Greeks assign to Americans. Table 9 includes those characteristics on which the Americans and the Greeks agree and Table 10 those on which they disagree. First, we note that on 5 out of 9 characteristics on which the American autostereotype agrees with the Greek stereotype of Americans, we have the expected relationship between amount of contact and stereotyping. On two items (emotional control and decisiveness) there is no relationship. On both of these characteristics the Greeks without contact consider the Americans quite extreme, and apparently contact does nothing to change this perception. A similar condition can be seen in Athens with the item "follows procedures exactly." However, in Thessaloniki the "no contact" Greeks appear to imagine that Americans act like robots (i.e., are superexact), but the contact groups see the Americans as more "human." Hence a reverse relationship is obtained.

The results of Tables 9 and 10 are also impressive in another sense. It appears that Greeks without contact have negative stereotypes of Americans and those with contact have much more positive stereotypes.

Table 9

Greek Heterostereotypes of Americans Showing Functional Relationships with the Amount of Contact

(Characteristics Which Agree with American Autostereotype)
(as per Triandis and Vassiliou 1967a)

Characteristics	Relationship to Contact
Systematic	Yes
Naive	Yes
Egotistic	U-Shaped relation
Trusting	Yes
Emotionally Controlled	None
Honest	Yes
Follow Procedures Exactly	Flat in Athens Reverse in Salonika
Decisive About Making Plans	None
Accept Changes in Working Conditions	Yes

Table 10

American Characteristics Showing Functional Relationships with the Amount of Contact

(Characteristics on which there is disagreement between Greeks, and Americans, as per the Triandis and Vassiliou (1967a) study)

Characteristics	Reported Contact (Present Study)	Actual Contact (Triandis and Vassiliou (1967a)
Dull	None	Yes
Arrogant	Reverse	Yes
Competitive	Reverse	Reverse
Haughty	Reverse	Yes
Inflexible	None	None
Drive competitively	None	None

The simplest way to summarize the total set of obtained results is this: Americans with no contact have vague and undefined stereotypes of Greeks. The greater the contact with the Greeks the more the American stereotypes of Greeks approach "reality." On the other hand, the "no contact" Greeks have a very definite set of stereotypes concerning Americans. They see Americans as most effective (systematic, following procedures exactly), though slightly on the dull side and a bit arrogant. This view is challenged by contact. The greater the contact the more the Americans become more "normal" on effectiveness, while still remaining more effective than the Greeks, and less arrogant.

We summarize all of these results by stating that the evidence obtained in the present study is strongly in favor of both the general theoretical notion underlying the Triandis and Vassiliou (1967a) study and the present study, and the specific hypotheses tested in both of these studies.

Demographic characteristics and stereotyping. There is an impression that American women in Greece are more dissatisfied with their husband's (assignment) than are their husbands. To test this we employed matched t-tests, on those American couples who were in our sample. If the argument is correct, then the stereotype of Greeks held by American females should be more negative than the stereotype held by their husbands. None of the tests proved significant, although there was a tendency for the American females to be higher than their husbands on the extent to which they say the Greeks as arrogant and sly. The data obtained from the two cultural groups, when broken down by sex, are conspiciously consistent across same-culture, sex-groups, and very different across different culture groups.

Looking now at the total samples of 202 American females and 241 American males, we note some consistent differences in the way they stereotype Greeks. Regardless of degree of contact, there is a tendency for the males to see the Greeks as more dull, and more rigid than do the females. Otherwise, the two groups are only distinguished by the phenomenal amount of agreement in their judgments.

Turning now to differences between Greek males and females, we note that the Athens females see Americans as less systematic, naive, and trusting, more competitive, less emotionally controlled, honest, exact, and decisive in making plans, than do the Athens males.

It is notable that there is a tendency for these sex differences to be exaggerated with the amount of reported contact. The Thessaloniki samples are smaller and do not show any sex differences.

We also asked the Americans how long they had been in Greece. We split the sample into those who had lived there for more than 18 months (N = 198) and those who had lived there for less than 18 months (N = 227). We examined the graphs relating contact and stereotyping for those two groups of Americans. Overall the 15 graphs obtained from the "short stays" did not differ from the 15 graphs obtained from the "long stays." However, on a few characteristics there were statistically significant differences. Thus, the long-stay-no-contact group tended to see the Greeks as more egotistical and as following procedures approximately, to a greater extent than did the remaining groups. Such people are obviously "resistant to contact" and probably unhappy with their overseas assignment, hence their deviation from the judgments of the other American

groups. Nevertheless, their judgments are veridical (Triandis and Vassiliou, 1967b). The "long stays," regardless of amount of contact, had a tendency to see the Greeks as arrogant. Triandis and Vassiliou (1967b) speculated that the oversensitivity to criticism of Greeks results in behavior which appears as arrogance to Americans. The "long stays," regardless of amount of contact, tended to see the Greeks as more competitive than the "short stays." This perception is also veridical (Triandis and Vassiliou, 1967b). We conclude that the comparison of the responses of the "long stays" with those of the "short stays" leads to the discovery of "real" characteristics; i.e., "valid" stereotypes as far as can be determined from other kinds of analyses, such as those of Triandis and Vassiliou (1967b).

What is the effect of age and social status on stereotyping? Table 11 supplies some answers. First, we note that the older the Greek S, the more positively he sees "Greeks." On 7 of the 15 characteristics there was such a tendency, while on only 2 there was the oppositive tendency (this is almost significant). Second, age appears unrelated to hetero-stereotyping. Third, the higher the social status the more favorable the stereotyping of Americans and the less favorable the stereotyping of Greeks. This is very clear for the Athens sample ($p < .01$) but not detectable in Thessaloniki sample. Similarly, in Athens, there are 6 occasions when the autostereotype of Greeks is worse in the case of the upper than the lower status people, and none in the opposite direction ($p < .01$ by Fischer exact test, two-tailed).

Table 11

The Relationship Between Demographic Characteristics and Stereotyping

(Age and Social Status Determinants of Stereotying)

	Sample					
	Age		Athens Social Status		Saloniki Social Status	
Characteristic	A*	H*	A	H	A	H
systematic	+	-	-	+	0	-
witty	0	0	0	-	-	-
naive	+	-	0	+	+	+
unselfish	+	0	0	0	+	+
modest	0	0	-	-	-	-
trusting	+	0	0	+	0	0
cooperative	0	0	0	+	-	0
obliging	0	0	0	+	-	0
emotionally controlled	-	0	-	0	0	-
flexible	0	+	0	0	0	+
honest	0	0	0	+	-	0
follows procedures exactly	+	+	-	+	0	-
decisive	+	0	-	+	+	0
drive carefully	-	-	-	+	-	-
accepts work change	+	0	0	+	0	+

*A means autostereotypes.

H means heterostereotype.

+ means that age (or social status) is related to the listed characteristic. (favorable stereotype).

0 means that age (or social status) is unrelated to the characteristic.

- means that age (or social status) is related to the opposite pole of the listed characteristic.

Changes in factor scores as a function of contact. In section 1, above, we examined the major stereotypes of the various groups in terms of the grouping of characteristics that was obtained from the factor analyses. Do the factor scores of a particular group, as judged on all scales having high loadings on a given factor, shift systematically with the amount of contact? For example, the Americans see the Greeks as impulsive (Table 2) and this factor is defined by three scales. Do the shifts in the judgments of the Americans as a result of contact on one of these scales follow the same patterns as the shifts on the other two scales? The answer is that generally this is not the case. Nevertheless, we examined some of these shifts systematically, and we also looked at the possible influences of demographic characteristics. Below we note those cases where there is a strong trend for the judgments of the several interrelated scales to shift in the same way, as a result of contact.

Americans see Greeks-there is a tendency for the factor scores to shift with contact, so that the greater the contact the more the Americans see the Greeks as distrusting outsiders (See Table 2). This trend is very strong for the long stay Americans. The factor "ineffective" (see Table 2) seems to follow the same pattern - i.e., the greater the contact, the more the Greeks seem to the Americans as ineffective, and the effect is exceptionally strong for the "long stays." Similarly, the "charming people" factor follows this trend.

Americans see Americans -- no trends.

Greeks see Americans -- on the "effectiveness" factor the scores shift with contact, males see Americans higher than do females, upper class Ss give higher responses than lower class Ss, and the young higher effectiveness responses than the old.

Greeks see Greeks -- the greater the contact with Americans the more the Greeks see themselves as obliging and honest. This trend is less pronounced for the upper social classes.

Discussion

Culture is the man-made part of the human environment. Differences in "objective culture" lead to differences in "subjective culture," that is, characteristic ways of perceiving and conceiving the social environment employed by different groups of people (Triandis, Vassiliou and Nassiakou 1968). For example, when a person from a highly hierarchical culture meets a person from a culture in which power is highly distributed, they are likely to disagree on many social issues. Thus differences in the characteristics of two groups of people may reflect differences in their objective culture, which are manifested in such characteristics. Such differences in characteristics lead to stereotypes which emphasize these differences. Contact has definite effects on the nature of stereotyping. The present paper illustrates these effects.

Specifically, the five hypotheses of the Triandis and Vassiliou (1967a) study were supported. The first of these, that the amount of contact will be related to clearer autosterotypes and heterostereotypes was supported for the American data but not the Greek. This result is consistent with previous findings. It might be that Americans know little about Greeks and they learn a good deal about them as a result of contact. On the other hand, Greeks respond as if they know a good deal about Americans and do not change as much in their stereotypes as a result of contact.

Another explanation of the obtained results can be derived from the great importance, in Greece, of the ingroup-outgroup distinction, which has already been reported (Triandis and Vassiliou 1967a, 1967b). The Greek ingroup consists of "family, friends, friends of friends, and people who are concerned with my welfare," while the outgroup consists of all other Greeks. Greeks tend to place people in one or the other of these groups as fast as possible, and once placed the other person acquires some characteristics appropriate to this placement. Simple contact between an American and a Greek will not necessarily make the American a member of the ingroup. Therefore simple contact will not produce a measurable effect on the Greek stereotype.

The second and third hypotheses stated that the greater the contact the more the Greek stereotype of Americans will "improve" and the American stereotype of Greeks will "deteriorate." These hypotheses were supported, as in the previous study. The fourth and fifth hypotheses dealt with the effects of contact on autostereotypes: they postulated that the American autostereotype will "improve" and the Greek will "deteriorate." Both hypotheses were supported in the present study.

The Greeks have a definite stereotype about Americans, which at low levels of contact is particularly exaggerated. Thus the Americans appear like robots, in complete control and totally effecient. Contact humanizes this image of the Americans held by the Greeks.

It is now necessary to examine what is meant by "favorable," "unfavorable," "improvement" and "deterioration" of the stereotypes. Returning to Tables 7, 8, 9, and 10 we note that although Greeks, in agreement with

Americans, assign to themselves certain "unfavorable" traits (e.g., unsystematic, suspicious, competitive, emotionally uncontrolled) these traits do not necessarily have an unfavorable connotation for the Greeks. Each of these traits taken singly correlates somewhat with the "bad" pole of the "good-bad" semantic differential scale (Triandis and Vassiliou 1967a), however, in the context of Greek culture the importance of these traits is small and their existance justifiable. For example, since Greeks are surrounded by outgroup members (see previous page for definition) they find it functional to be suspicious and competitive. Since they value spontaneity they find no obvious advantage in being systematic and emotionally controlled.

On four traits (Table 8) the Americans and Greeks disagree. First, the Americans see the Greeks as sly; the Greeks do not see themselves as sly but as suspicious. They probably do have this characteristic but this is a tactical behavior which is required for the placement of the other person in the ingroup or the outgroup. This behavior might be "interpreted" by Americans as slyness. Second, the Americans see the Greeks as egotistic and arrogant because the Greeks are unyielding in their opinions and hold their positions obstinately. The Greeks behave this way because they hold their opinions as "representatives" of the ingroup, i.e., they defend positions shared by their ingroup, hence they perceive such behaviors as leading to support for the ingroup; therefore these behaviors are not seen as egotistic. Such behaviors function to increase the Greek's self-esteem because they increase his acceptance by the ingroup and his perceived prestige in the outgroups. Finally, the Americans see the Greeks

as indecisive, but the Greeks see themselves as decisive. It should be remembered that in the early phase of contact, which is of course more characteristic of American-Greek interactions, the Greeks are indeed suspicious and indecisive, because they are deciding whether the American will be a member of their ingroup or their outgroup. But once this decision is made they behave decisively. This latter phase is the one that is important for the Greeks, hence they see themselves as decisive.

It should be clear, from the above discussion, that changes previously described as "unfavorable," or as a "deterioration" of the stereotype, do not imply changes in self esteem. The above interpretation is probably an important insight into the functioning of autostereotypes, which was lacking from our previous paper. It also adds understanding concerning the relationship between stereotyping and intercultural interaction.

The present replication of our previous study illustrates the value of replication of studies employing different methodology. We changed our independent variable's measurement (degree of contact) and discovered in addition a change in the measurement of our dependent variable (stereotyping). Upon reflection it can also be argued that the meaning of contact is different in our two studies. Furthermore the meaning of contact for a Greek having frequent contact with an American in Greece, in only comparable to the meaning of contact of an American having frequent contact with Greeks in the United States, rather than in Greece. Finally, the functional bases of various traits make them differentially desirable in different cultural settings and add further complexities to our interpretation of stereotyping.

The implication of these findings is that the model proposed by Triandis and Vassiliou to account for contact and stereotyping is too simple. It does not allow for the level of stereotypes that exists before contact or for the modification in the meaning of traits. The model appears to be applicable when a population does not have strong preconceptions about a group of people (e.g., American views of the Greeks) but it does not apply to populations which have strong preconceptions about other groups (in our study: the Greek view of Americans). The preconceptions, formed in response to historical events, tradition, the mass media and the "educational systems" of various countried create a "normative stereotype" -- i.e., a stereotype which is a cognitive norm for thinking about a group of people. Contact modifies the normative stereotype so that it approaches what Bogardus called a "sociotype" -- i.e., a substantially realistic assignment of traits to a group of people.

We, therefore, restate our theory of stereotyping as follows: when members of Group A are exposed to the cognitive norms of Group A about Group B they develop a "normative sterotype" about Group B. When Group A does not have a normative stereotype about Group B, members of Group A will begin by thinking about Group B as being "like me."

In Figure 2 we present the theoretical paths of the stereotypes relevant to trait X. When members of Group A are exposed to information or norms of thinking about Group B they will have a stereotype represented by point E. Contact brings this stereotype to a more realistic level,such as point F. The sociotype of B, for characteristic X, is well below point F. On the other hand, when members of Group A have not been exposed

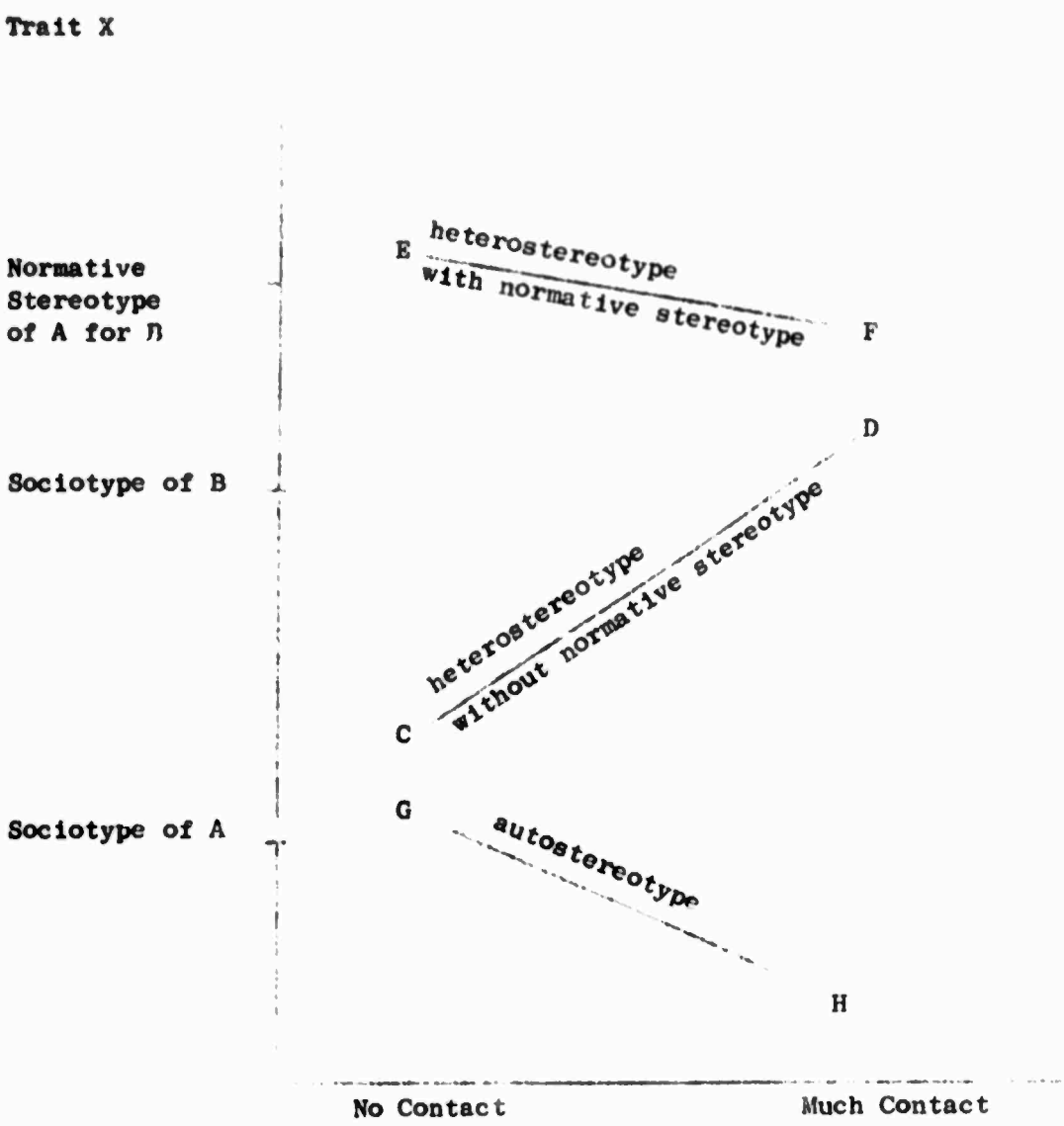


Figure 2. Theoretical changes in stereotypes as a result of contact

to cognitive norms about B, they begin at point C and contact changes their stereotype so that it is represented by point D. We hypothesize a certain amount of contrast, so that point D is again higher than the actual sociotype would indicate. With respect to autostereotyping, Group A begins at point G and as a result of contact sees itself as being at point H, which is somewhat lower than the sociotype for Group A.

Figure 1 fits most of the observations of our study. We assume that Tables 7 and 8 represent the sociotypes of Greeks. Contact has the effect of making the American stereotype approach these sociotypes. Similarly, Table 9 presents mostly sociotypes of Americans and the Greek stereotypes change in the direction of these sociotypes. On the other hand, Table 10 presents normative stereotypes that Greeks have about Americans and contact produces the reverse relationship (or no relationship) (i.e., the stereotypes follow the EF line of Figure 2).

The theoretical model does not imply anything about favorability, since characteristics X can be positive, negative, or neutral.

The argument that contact leads to stereotypes that are closer to sociotypes, is also supported by the observation that the Americans who have stayed in Greece for a longer time make judgments that are more consistent with our analysis of Greek national character (Triandis and Vassiliou 1967b) than do the Americans who have been in Greece for less than 18 months.

Our findings concerning the clarity of the stereotypes are also consistent with the analysis of Figure 2. Most of the American stereotypes of Greeks change along the CD line, i.e., Americans do not have normative stereotypes about Greeks. Hence, the greater the amount of contact that

Americans have with Greeks the clearer will be their stereotypes. This is exactly what we observed. On the other hand, Greeks have definite normative stereotypes of Americans. Hence, clarity in the sense of within group agreement, is already present without contact and is not changed by it.

One major qualification of this theory is in order. The theory applies in the case of non-normative sterotypes only when the "other group" is friendly. It is assumed that when the other group is not friendly, the ingroup will develop appropriate normative stereotypes, so that the EF rather than the CD line will be appropriate.

Our theory of stereotyping can now be stated as follows:

1. The larger the difference between the sociotypes of Groups A and B, on characteristic X, the more likely it is that X will appear in the stereotypes of the two groups.
2. Contact has the effect of changing the stereotypes to match the sociotypes, i.e., increases the validity of stereotypes.

2a. Non-normative stereotypes change very much with contact.

2b. Normative stereotypes change very little with contact.

3. The greater the contact the greater the clarity of non-normative stereotypes.

3a. Contact has no effect on the clarity of normative stereotypes.

4. The greater the contact the more contrastive will be the auto-stereotypes.

5. The greater the contact the greater the complexity of stereotypes.

6. The greater the contact the greater the specificity of stereotypes.

7. When $\bar{X}_A - \bar{X}_B$ is large there will be a contrast phenomenon, i.e., the two groups will see each other as more different than they really are.

8. When there is neither contact nor normative stereotypes the nature of hetero-stereotypes will be purely projective. The greater the contact the less projective the stereotype (and the more valid, as per 2 above).
9. When $\bar{X}_A - \bar{X}_B$ is small and contact is large there will be no differences perceived between auto- and heterstereotypes.
10. Autostereotypes are coordinated with other self-percepts so as to maximize self-esteem.

Implications for Internation Understanding

Social scientists have known, for some time, that simple contact is not sufficient for improving intercultural understanding. In fact, more contact has a negative effect in interpersonal perception in the case of cultural groups that are "superior" on some dimension. However, they have not been clear about the parameters of this phenomenon. The present study sheds some light on the effects of contact in person perception. One of our previous studies (Triandis and Vassiliou, 1967b) showed the complexity of the analysis of the subjective culture of national groups. It seems probable that no less than the understanding of the subjective culture of a national group is necessary for effective intercultural relations. Since mere contact is not likely to lead to such an analysis or understanding of subjective culture, it is now easy to see that some more powerful forms of intervention are necessary to improve international understanding.

Intervention can occur at least at two points. First, the educational systems of various countries might provide information which will lead to

more accurate normative stereotypes. Second, extensive training may be provided to prepare a person for interaction in another culture. The degree of training that is required to avoid cross-cultural misunderstanding may be greater than what is required to master a foreign language. Very few people, in any culture, ever get that much training. It is not suggested that such intensive programs of intercultural training should lead to the elimination of cultural differences. What is needed is simply enough knowledge of the basic value premises of each culture to allow increased predictability of the "other person" in a cross-cultural encounter. Otherwise a number of defensive patterns may lead to intensive negative stereotyping, confusion, hostility, scape-goating, and similar undesirable interpersonal phenomena.

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13. ABSTRACT

The autostereotypes and heterostereotypes of 435 Americans living in Greece, concerning Greeks, and the autostereotypes and heterostereotypes of 668 Greeks, representative of the population of the two largest cities of Greece, concerning Americans, were studied through a modified semantic differential interview. The data replicated all five hypotheses proposed by Triandis and Vassiliou (1967a). However, closer examination suggested some revisions to their theory of stereotyping. A modified theory of stereotyping is proposed, which accounts for all the data.

14. KEY WORDS

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